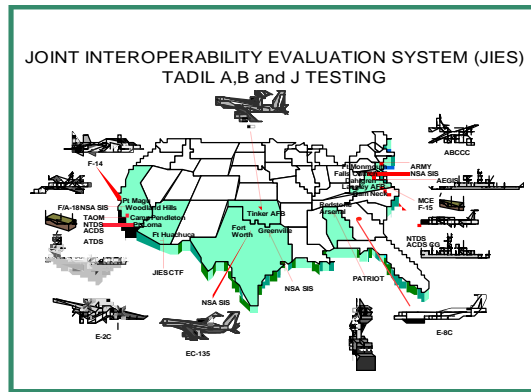


OPERATIONAL ENVIRONMENT

The current connectivity of the distributed JTDL testbed is depicted below. Along with JITC, the military Services and Defense Agency testbeds provide the full range of testing capabilities required for the joint standards validation, standards conformance, interoperability certification and performance testing. The integrated network constitutes the framework for certification testing. Test analyses and recommendations are provided to the user as part of the unique service provided by JITC.

INTERNATIONAL ARENA



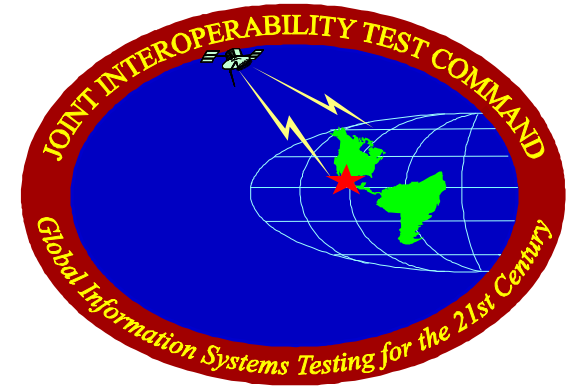
JITC is the test agent for combined interoperability testing. Combined tests are conducted with NATO members under the NATO Interoperability Management Plan (NIMP) and with Singapore, Australia, New Zealand, Japan, Korea, and Thailand, under the Pacific Command Combined Interoperability Program (PACOM CIP). We expect this program to expand significantly in the coming years.

POINT OF CONTACT

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**JOINT TACTICAL
DATA LINK (JTDL)
LABORATORY**



Joint Interoperability Test Command

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INTRODUCTION

Tactical Data Links (TADIL)

In its capacity as the testing arm of the Defense Information Systems Agency (DISA), the Joint Interoperability Test Command (JITC) plays a major role in the evolution of the Department of Defense's (DoD's) information exchange testing of tactical Command, Control, Communications, Computer and Intelligence (C⁴I) systems. As the DoD's Executive Agent for testing information exchange among these systems, JITC is responsible for ensuring these systems are in compliance with joint standards and are interoperable. This is accomplished by conducting the following types of tests:

- ◆ Standards Validation
- ◆ Standards Conformance
- ◆ Joint/Combined Interoperability
- ◆ Performance Assessment in Operational Environments

The diverse nature of DoD C⁴I systems, each with a wide range of capabilities, presents many challenges to today's interoperability requirements. The demand for interoperability between US and international systems establishes the need for a testbed which verifies standards validation, standards conformance, interoperability, and operational performance. To conduct this testing, the JITC uses the Joint Interoperability Evaluation System (JIES) for TADIL-A/B/J testing, and the Joint Operational C⁴I Assessment Team (JOCAT) for operational assessment of tactical data links testing. Planned future enhancements include Variable Message Format (VMF) testing.

*Visit our World Wide Web Homepage at
<http://jitc.fhu.disa.mil>*

JIES

JIES is a computer system designed to support testing of DoD tactical C⁴I systems' TADIL-A/B/J standards compliance and interoperability in joint (US) and

combined (US/Allied) operations. JITC uses operationally configured system hardware and software for TADIL testing.

JIES is equipped with a sensor stimulator and is capable of providing participating systems sensor tracking simulation. JIES records all the exchanged messages and produces a formatted report to facilitate post-test analysis of interface operations and system performance. For TADIL-A/B, the JIES interfaces with participating systems through standard communications and cryptographic equipment. For TADIL-J testing, connectivity between the remote C⁴I systems and their JTIDS terminals is achieved through a gateway system produced by Space and Naval Warfare Systems (SPAWAR) in San Diego. This allows systems to use 'Virtual Hosts' collocated with each C⁴I system and 'Virtual Terminals' located at JITC. Systems are connected to JIES through leased T-1 grade telephone lines or commercial dial-up lines.

JOCAT

The JOCAT is a modular, deployable, equipment, and personnel team that provides JITC the capability to conduct real-time, near-real time (NRT) and post test assessment and analysis of C⁴I systems, to include national, strategic, and tactical data transfer for the Joint Data Network (JDN), Joint Planning Network (JPN), and the Joint Composite Tracking Network (JCTN). Additionally, JOCAT will support assessment of the Family of Systems (FoS) for Joint Theater Air and Missile Defense and system interoperability assessment and certification during CINC field exercises. Specifically, the JOCAT will provide the ability to conduct NRT analysis of collected data and critical intelligence feeds essential to the evaluation and assessment of C⁴I systems ability to provide decision makers an accurate and timely single integrated air picture (SIAP).

During real-time, the JOCAT provides the capability to view a set of displays (graphic and text based) and the information portrayed on the displays and voice nets to determine items of interest for analysis in near real-time.

During near real-time, the analysis is based on discrete

events and anomalies noted under the direction of the real-time operator. The near real-time analysis is also based on specific analysis to support the exercise requirements (such as JTAMD critical operational issues or objectives based on the exercise support plan).

During post exercise, the analysis is primarily a set of queries that generate standardized reports in "batch" modes that minimize operator interaction. Post exercise reports consist of aggregate counts of messages or time measurements and exercise subject areas of interest.

WHAT STEPS ARE REQUIRED FOR CERTIFICATION?

The DoD has directed that "all C⁴I systems developed for use by US forces are considered to be for joint use." The Joint Staff published the TADIL-A/B/J standards we use to ensure systems meet end users' information exchange needs and interoperability requirements. Program Milestone decisions now depend on joint interoperability and certification.

All policy documents pertaining to joint interoperability testing and certification are on our web site at <http://jitc.fhu.disa.mil/ciidocs.htm>

1. Contact your service Participating Test Unit Coordinator (PTUC) listed below.
2. Contact JITC POC for inclusion in the System Tracking Program. PMs should put in a placeholder for their system early in program development.
3. Plan and budget for Joint Interoperability Testing during development (CJCSI 6212.01A, Enc. G,H).
4. Include Joint Testing and Certification in MNS, ORDS, and TEMPS (CJCSI 6212.01A).
5. Provide system TADIL Implementation and System Descriptions to JITC.

Service Participating Test Units

Air Force	Ms Robbie Laity	DSN574-5645
Navy	Mr Steve Shebloski	DSN553-7316
Army	Ms Nalini Kukke	DSN987-2482
Marines	Ms Julie Goodrich	DSN365-2165
NSA	Mr Curt Dorsey	DSN969-5156